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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,241	01/14/2002	Matthias Bratz	42044 Cont.	1890
26474 7590 05/10/2011 NOVAK DRUCE DELUCA + QUIGG LLP 300 NEW JERSEY AVENUE NW FIFTH FLOOR WASHINGTON, DC 20001			EXAMINER QAZI, SABIHA NAIM	
			ART UNIT 1628	PAPER NUMBER
			MAIL DATE 05/10/2011	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/043,241

**Applicant(s)**

BRATZ ET AL.

**Examiner**

SABIHA QAZI

**Art Unit**

1628

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 22 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-17, 19, 20 and 22-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-17, 19, 20 and 22-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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**Final Office Action**

Claims 10-17,19, 20 and 22-31 are pending. New claims 24-31 are added. No claim is allowed. Amendments are entered. .

**Summary of this Office Action**

1. Information Disclosure Statement
2. Copending Applications
3. Specification
4. 35 USC § 112 --- First Paragraph Written description Rejection
5. 35 USC § 112 --- First Paragraph Scope of Enablement Rejection
6. 35 USC § 103(a) Rejection
7. Response to Remarks
8. Conclusion
9. Communication

**Information Disclosure Statement**

The references cited in the specification are not listed in IDS. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. In case of foreign patents applicant should provide English abstract and/or the translation of the document to be considered.

**Copending Applications**

Applicants must bring to the attention of the examiner, information within their knowledge as to other copending United States applications and or Patents, which are "material to patentability" of the application in question. MPEP 2001.06(b). See DAYCO Products Inc. v. Total Containment Inc., 66 USPQ2d 1801 (CA FC 2003).

**Specification**

Amendments in specification filed on 4/30/08 are not entered. The amendments filed on 1/14/02 contain serial number 09/341,524. This will be entered after the correction. Amendments in the specification filed on 2/27/04, 5/24/04, and 6/15/07 will be entered. Applicant's remarks do not contain the explanations of the amendments filed on 4/30/08 which was mention in written description rejection. Examiner requests the clarification of the amendments in the specification, underlining the changes in a copy of specification and to submit a clean copy of the current specification. Applicant must include the description why and where the amendments were made. Too many amendments with unclear record are not acceptable.

The specification must not contain new matter. The changes in specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

**35 USC § 112 --- First Paragraph Written Description Rejection**

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
2. Claims 10-17, 19, 20, and 22-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
3. Claim 10 part c) proviso is new matter. It is negative limitation.

4. In claim 31 “consisting essentially of” “is new matter. The term “consisting essentially” in the specification never specifically disclosed the term, and never contemplated the exclusion of particular ingredients as implied therein.
5. In claim 31 “at least” is new matter.
6. Amendments filed on 4/30/08 are new matter.

Applicant at the time of filing the application had no possession of all the claimed subject matter.

The written description requirement prevents applications from using the amendment process to update the disclosure in their disclosures (claims or specification) during the pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating an accurate accounting of the priority of the invention. See 35 USC 132. The function of description requirement is to ensure that the inventor had possession, as of filing date of the application relied on, the specific subject matter claimed by him.

See *Genetech*, 108 F 3d 1361, 1365 (Fed. Cir. at 1366, 78, 1999).

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to one skilled in the art that the inventor had the possession at the time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claimed language. See *In re Kaslow*, 707 F 2d 1366, 1375 (Fed. Cir. 1983).

Claims are broad and the description requirement of the patent statute requires a description of an invention, not an indication of a result that one might achieve if one made that invention. See, e.g., *In re Wilder*, 22 USPQ 369, 372-3 (Fed. Cir. 1984). (Holding that a claim was not adequately described because the specification did ‘little more than outline goals appellants hope the claimed invention achieves and the problems the invention will hopefully ameliorate.’)

A chemical genus can be adequately described if the disclosure presents a sufficient

number of representative species that encompass the genus. *If the genus has substantial variance, the disclosure must describe a sufficient number of species to reflect the variation within that genus.* See MPEP 2163.

Here, the specification does not provide a reasonably representative disclosure of solid sulfonylurea mixture as claimed, a potentially huge genus inclusive of many different compounds having widely divergent structures and functions. Specifically, the specification discloses only one species metsulfuron methyl in Example 16 on page 32 and these are not viewed as being reasonably representative of the genus in its claimed scope because no readily apparent combination of identifying characteristics is provided, other than the disclosure of those specific species as examples of the claimed genus.

In the present case Applicant has no possession of method of the subject matter at the time the application was filed. Applicant is kindly requested explain this issue.

### **35 USC § 112 - First Paragraph Scope Enablement Rejection**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

*The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.*

Claims 10-17,19, 20 and 22-31 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a solid sulfonylurea herbicide which is **metsulfuron methyl in Example 16 on page 32 of the specification**, does not reasonably provide enablement for a solid mixture of *all* sulfonylurea herbicides as claimed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

To be enabling, the specification of the patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation. In re Wright, 999 F.2d 1557, 1561 (Fed. Cir. 1993). Explaining what is meant by “undue experimentation,” the Federal Circuit has stated:

The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the claimed invention. PPG v. Guardian, 75 F.3d 1558, 1564 (Fed. Cir. 1996).<sup>1</sup>

Factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in In re Colianni, 195 USPQ 150, 153 (CCPA 1977), have been clarified by the Board of Patent Appeals and Interferences in Ex parte Forman, 230 USPQ 546 (BPAI 1986), and are summarized in In re Wands (858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed Cir. 1988)). Among these factors are: (1) the nature of the invention; (2) the state of the prior art; (3) the relative skill of those in the art; (4) the predictability or unpredictability of the art; (5) the breadth of the claims; (6) the amount of direction or guidance presented; (7) the presence or absence of working examples; and (8) the quantity of experimentation necessary.

When the above factors are weighed, it is the examiner's position that one skilled in the art could not practice the invention without undue experimentation.

*Presently claimed invention is drawn to:*

Claim 10 is drawn to a solid mixture comprising a) a sulfonylurea herbicide,

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<sup>1</sup> As pointed out by the court in In re Angstadt, 537 F.2d 498 at 504 (CCPA 1976), the key word is “undue”, not “experimentation”.



b) an alkylpolyglycoside, and

c) optionally one or more further active compounds, with the proviso that said further active compound (c) is different from aminophosphoric acids.

*A solid mixture comprising a) a sulfonyleurea herbicide and*

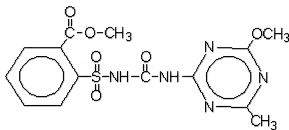
*b) an alkylpolyglycoside (claim 10). The term "sulfonyleurea" (for example, see the Formula in claim 11 where Z is nitrogen or carbon also includes thousands of compounds. Similarly see the Formula in claim 22, where J can be different heterocyclic and non-heterocyclic groups), polyalkylglycosides and one or more active compound is very broad and contains hundreds of thousand of compounds.*

**(1) The nature of the invention:** The claims are drawn to a solid mixture comprising a sulfonyleurea herbicide, an alkylpolyglycoside and one or more active compounds which includes all the known and unknown sulfonyleurea herbicides.

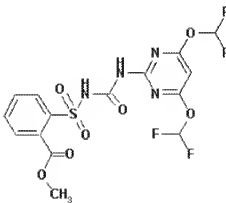
**(2) The predictability or unpredictability of the art:** Because of the known unpredictability of the art, and in the absence of experimental evidence, no one skilled in the art would accept the assertion that the instantly claimed agents could be predictably used for controlling undesirable plant growth by using solid mixtures as inferred by the claim and contemplated by the specification. Accordingly, the instant claims do not comply with the enablement requirement of §112, since to practice the claimed invention in its "full scope" a person of ordinary skill in the art would have to engage in undue experimentation, with no assurance of success.

There is lack of predictability in the in the art. Claims are broad and are drawn to any sulfonyleurea herbicide (claim 10), which encompasses thousands of compounds for example; see the Formula in claim 11 where Z is nitrogen or carbon. Similarly see the Formula in claim 22, where J can be different heterocyclic and non-heterocyclic groups. All of these compounds

encompass thousands and thousands of compounds. The specification does not have the support for such a wide variety of compositions and methods of the compounds. See KENJI HIRAI (Herbicide Classes in Development, mode of actions, targets, genetic engineering and chemistry, Springer, See the entire document especially Table 1 on page 181, Figs 1-6 on page 187-192). Structural modification of sulfonylureas with nitrogen-containing heterocycles such as pyrrole and pyrazole rings is shown chronologically in Figure 5, which includes pyrazosulfuron-ethyl and halosulfuron-methyl. Various type of sulfonylureas with five membered heterocycles are shown in Fig. 4, such as thifensulfuron. Other sulfonylureas possessing benzyl, sulfonamido, aniline and phenoxy groups are depicted in Fig. 6. Prediction to make any mixture or to predict any property for such a large number of compounds having different chemical structure and different properties is impossible as can be seen in the cited reference.



**Metsulfuron methyl (Applicants exemplified compound)**



Primisulfuron

Applicant's own specification discloses in amendments filed on 1/14/2002 that sulfonylureas of the formula III (equivalent to the formula when J=J1 ) are known, for example, from EP-A388,873, EP-A 559,814, EP-A 291 851 and EP-A 446 743 which includes large number of compounds.

**(3) The amount of direction or guidance presented:** There is no guidance in the disclosure on how to make use the invention successfully with *all* sulfonylurea herbicides, polyalkylglycosides, just metsulfuron-methyl (example 16).

In re Dreshfield, 110 F.2d 235, 45 USPQ 36 (CCPA 1940), gives this general rule: "It is well settled that in cases involving chemicals and chemical compounds, which differ radically in their properties it must appear in an applicant's specification either by the enumeration of a sufficient number of the members of a group or by other appropriate language, that the chemicals or chemical combinations included in the claims are capable of accomplishing the desired result."

The courts have further interpreted undue experimentation as requiring "ingenuity beyond that to be expected of one of ordinary skill in the art" (Fields v. Conover, 170 USPQ 276 (CCPA 1971)) or requiring an extended period of experimentation in the absence of sufficient direction or guidance (In re Colianni, 195 USPQ 150 (CCPA 1977)). Additionally, the courts have determined that "... where a statement is, on its face, contrary to generally accepted scientific principles", a rejection for failure to teach how to make and/or use is proper (In re Marzocchi, 169 USPQ 367 (CCPA 1971)).

**(5) The presence or absence of working examples:** There are no working examples and/or data to support the invention as presently claimed with *all* sulfonylureas; there is only one example to support solid mixture of **metsulfuron-methyl**. The disclosure does not contain working examples to support solid mixture of all sulfonylurea herbicides and polyalkylglycosides when **only metsulfuron-methyl**, as claimed.

A disclosure should contain representative examples, which provide reasonable assurance

to one skilled in the art that the compounds fall within the scope of a claim will possess the alleged activity. See *In re Riat et al.* (CCPA 1964) 327 F2d 685, 140 USPQ 471; *In re Barr et al.* (CCPA 1971) 444 F 2d 349, 151 USPQ 724.

It has been established by the Courts that a single species is seldom, if ever, sufficient to support a generic claim. *In re Shokal*, 242 F.2d 771, 113 U.S.P.Q. 283, 285 (C.C.P.A. 1957). See also, *In re Grimme*, 274 F.2d 949, 124 U.S.P.Q. 499, 501 (C.C.P.A. 1960) (the naming of a member of a genus or subgenus is not a proper basis for claiming the whole group).

Objective evidence of nonobviousness must be commensurate in scope with the scope of the claims. *In re Tiffin*, 171 USPQ 294. A showing limited to a single species can hardly be considered probative of the invention's nonobviousness in view of the breadth of the claims.

**(6) The quantity of experimentation necessary:** Since there is no guidance and/or direction provided by the Applicants in the disclosure to support for a solid mixture containing *all* sulfonylurea herbicides, polyalkylglycosides as claimed, one skilled in the art at the time of invention would have to go through undue experimentation to make and/or use the presently claimed invention.

#### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

#### **Claimed Invention**

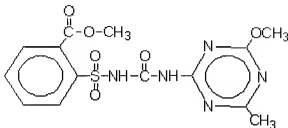
Amended claim 10 is drawn to a solid mixture comprising

- a) a sulfonylurea herbicide,
- b) an alkylpolyglycoside, and
- c) optionally one or more further compounds,

with the proviso that said further active compound (c) is different from aminophosphoric acids.

#### **Elected species**

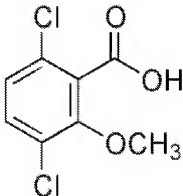
- a) Metsulfuron methyl



b) Polyalkylglycosides which is compound AGR6202

and

c) Decamba



#### TRADE OR OTHER NAMES

Metambane, Dianat, Banfel, Banvel, Banvel CST, Banvel D, Banvel XG, Mediben.

Claims 10-17, 19, 20 and 22-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over KOCUR et al<sup>2</sup>, DUPONT<sup>3</sup> and MALIK et al<sup>4</sup>.

#### *Determining the scope and contents of the prior art (MPEP § 2141.01)*

DUPONT teaches that granules of sulfonylurea including the elected species. Escort, Oust, and Telar (all members of the sulfonylurea family of herbicides) and Escort (Escort is metsulfuron methyl which is the elected invention and the only exemplified sulfonylurea).in the

<sup>2</sup> US Patent No. 5,258,358. Published November 2, 1993. See the entire document, especially Formula (I) in col. 1, lines 55-59 in col. 2, lines 29-35 in col. 3, Table 1 in col. 3 and 4, claims, and examples.

<sup>3</sup> Dupont Escort®, Oust®, Telar® Product Information Bulletin, June 1996, 4 pages. See the entire document. Filed in Applicants' PTO-1449.

form of dispersible granules are stable when stored in their original containers at normal temperatures. DUPONT teaches that sulfonylurea herbicides are very effective inhibitors of plant cell division and growth. They inhibit the activity of a key enzyme in plants (acetolactate synthase, or ALS) for plant cell growth.<sup>5</sup> Furthermore,<sup>6</sup> DUPONT also teaches that, at pH 5 and pH 9, the hydrolysis half-life is stable.<sup>7</sup>

KOCUR et al teaches liquid herbicidal compositions comprising a compound of the Formula (I) and an alkyl polyglycoside and at least one surfactant. KOCUR et al teaches that the surfactants mentioned can be employed advantageously in combined formulations of I with other herbicidal active substances such as sulfonylureas like DPX-L-5300 (tribenuron), thiameturon-methyl, **metsulfuron-methyl (elected species)**, or nicosulfuron (Ishihara), where they can enhance the action of I.<sup>8</sup>

*Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art (MPEP § 2141.012)*

Instant claims differ from DUPONT does not teach specifically polyalkylglycosides. KOCUR et al in that KOCUR teaches the combination compound of Formula I **with** alkylpolyglycosides and sulfonylureas in liquid form, whereas the instant claims are drawn to comprising a combination of alkylpolyglycosides and sulfunonylureas in solid form.

**KOCUR** teaches that various materials such as insecticides, insect repellents, fungicides, bactericides, herbicides, and plant growth regulators may formulated into various products for use on crops, for insect control, weed control and the like. Often, these products are applied as a dry powder or a granular material to the surface, which is desired to be treated.<sup>9</sup> MALIK et al

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<sup>4</sup> US Statutory Invention Registration H224, published on March 3, 1987. See the entire document.

<sup>5</sup> See second paragraph on page 1.

<sup>6</sup> See "Stability" paragraph on page 1.

<sup>7</sup> See "Hydrolysis Half-Life Table" on page 2.

<sup>8</sup> See lines 55-59 of col. 2.

<sup>9</sup> See lines 11-17 of col. 1.

teaches a specific dispersing aid is often employed when the product is to be applied in a powder or dry form and yet a second different dispersing aid is required when the product is to be applied as a semi-solid or liquid composition. It would be advantageous to prepare a product comprising the active ingredient and to utilize a single dispersing agent without regard to whether the final use application of the product is in a liquid or solid formulation. Moreover, the desirability of using a single ingredient as a dispersing agent reduces the possibility for error given the number of chemicals, which must be compounded to prepare a herbicide or insecticide product.<sup>10</sup> MALIK et al specifically mentions the usefulness of alkyl polyglycosides.<sup>11</sup>

MALIK et al teaches the lower Degree of Polymerization (DP), lower alkyl chain-length materials tend to be rather water insoluble and thus are excellent for incorporation in powdered or pulverant products whereas the higher DP material are valuable in that they have substantial emulsification capacity to function as a dispersing agent in the present invention.

The reference further teaches that generally, as the number of carbon atoms aglycone portion of the molecule increases the product becomes less soluble, thereby holding the active ingredient on plant surface.

*Prima facie Obviousness and motivation (MPEP § 2142 to 2143)*

It would have been obvious to one skilled in the art at the time the invention was filed to prepare a solid composition containing sulfonylurea and alkylpolyglycosides because first DUPONT teaches solid granules of elected and exemplified sulfonylurea and teaches the advantages of being excellent herbicides and are known to be stable in solid form second, alkylpolyglycosides are known to be excellent surfactant and also can be in the solid form such as granule. Third, that since both the compounds is known to exist in solid form therefore it would

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<sup>10</sup> See lines 29-41 of col. 1.

<sup>11</sup> See lines 34-37 of col. 2.



have been obvious to prepare a solid composition containing sulfonylurea and alkylpolyglycoside.

One skilled in the art would have been motivated at the time of invention to prepare any solid composition of any herbicides such as sulfonylureas and alkyl polyglycosides because the prior art of MALIK et al and DUPONT teach these compositions, their uses, and their process of making. The solid composition has been taught by the prior art. Therefore, one skilled in the art who needs to prepare a solid composition of herbicide sulfonylurea and polyglycosides would be able to make and/or use it because the prior art teaches such compositions and their uses. One skilled in the art would have been motivated at the time of invention to make the composition of alkylpolyglycoside and sulfonylurea herbicides as presently claimed because the KOCUR et al teaches the effective and advantageous combination of alkylglycosides and sulfonylurea herbicides and glufosinate. The instant invention is drawn to the same combination minus glufosinate, but the term "comprising" allows additional ingredients to be added. Also, the motivation is provided by KOCUR because it teaches the combined formulations sulfonylureas and polyalkylglycosides are storage-stable, undergo virtually no chemical changes, and are simple to handle.<sup>12</sup>

The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., *>Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) ("**Comprising**" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); *In re Baxter*, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948) ("**comprising**" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts").

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<sup>12</sup> See lines 29-31 in col. 3.

KOCUR et al teaches that the combined formulations containing sulfonyl ureas and polyalkylglycosides are **storage-stable, undergo virtually no chemical changes, and are simple to handle.**<sup>13</sup> **DUPONT teaches that dispersible granule is more stable.**

See KSR Supreme Court of United States Decision (Decided April 30, 2007, KSR INTERNATIONAL CO. v. TELEFLEX INC. et al. No. 04-1350) where it states that “However, the issue is not whether a person skilled in the art had the motivation to combine the electronic control with an adjustable pedal assembly, but whether a person skilled in the art had the motivation to attach the electronic control to the support bracket of pedal assembly”. In the present case the combination of alkylpolyglycoside and sulfonylurea in solid form as claimed would have been obvious to one skilled in the art at the time the invention was made because prior art teaches the combination of both the components as cited above.

In the light of the forgoing discussion, the Examiner’s ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

**Data in the Specification and response to Remarks**

Applicants response filed on July 10, 2009 is hereby acknowledged. Final office action mailed on 11/23/09 is withdrawn and a new final action is now issued following petition decision on 12/30/09.

**Specification**

The amendments filed on 1/14/02 contain serial number 09/341,524. Applicant’s response is silent on it. Applicant should correct the serial number for record. Reply on amendments in the specification filed on 02/27/04, and 5/24/04, 06/15/07 and 04/30/08 is considered.

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<sup>13</sup> See lines 29-31 in col. 3.

**Rejection under 112 (1)**

1. Applicant argues that in claim 10, negative proviso in part (c) is not a new matter. Applicant argues that negative proviso is not a new matter. Examiner disagrees because it has been decided by the court that “Any negative limitation or exclusionary proviso must have basis in the original disclosure.” See *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977). In *In re Johnson*, the court noted that any negative limitation or exclusionary proviso must have basis in the original disclosure. Only if alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. In the present case the negative limitation/exclusionary proviso does not have basis in the original disclosure, and the alternative elements were not positively recited in the specification, they are generically disclosed, so the Applicants’ argument is not relevant to the current issues. See also *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff’d* mem., 738 F.2d 453 (Fed. Cir. 1984). Any claim containing a negative limitation, which does not have basis in the original disclosure, should be rejected under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. In *Purdue Pharma LP v Faulding, Inc.*, 230 F.3d 1320, 1326, 56 USPQ2d 1481, 1486 (Fed. Cir. 2000), the court noted that with respect to *In re Ruschig*, 371 F.2d 990, 154 USPQ 118 (CCPA 1967), “Ruschig makes clear that one cannot disclose a forest in the original application, and then later pick out a tree of the forest and say, “here is my invention”. In order to satisfy the written description requirement, the blaze marks directing the skilled artisan to that tree must be in the originally filed disclosure.” *Purdue* is relevant in this case, because the Applicants disclosed a genus (“a forest”) in the original application, then later picked out two specific compounds (“a tree of the forest”), and are now saying, “here is my invention”. In order to satisfy the written description requirement, according to *Purdue*, the Applicants must disclose the specific compounds in the originally filed disclosure.” (See (56 USPQ2D 1481). More from *Purdue*: The case of *In re Ruschig*, 379 F.2d 990, 154 USPQ 118 (CCPA 1967), is instructive here (see page 1487). The claim at issue in that case was directed to a single compound. The appellants argued that, although the compound itself was not disclosed, one skilled in the art would find support for the claimed compound in the general disclosure of the genus of

compounds to which the claimed compound belonged. The Ruschig court rejected that argument, stating: [i]t is an old custom in the woods to mark trails by making blaze marks on the trees. It is of no help in finding a trail or in finding one's way through the woods where the trails have disappeared-or have not yet been made, which is more like the case here-to be confronted simply by a large number of unmarked trees. We are looking for blaze marks, which single out particular trees. We see none. *Id.* at 994-95, 154 USPQ at 122.

2. Applicant argues that "consisting essentially of" is not a new matter. Examiner disagrees because in claim 31 "consisting essentially of" is new matter. The term "consisting essentially" in the specification never specifically disclosed the term, and never contemplated the exclusion of particular ingredients as implied therein nor does it provide any criteria for determining if a given ingredient "materially affects the basic or novel characteristics of the invention".

3. Applicant argues that "at least" is not a new matter. Examiner disagrees because the term "at least" cited in claims is inclusive and fails to exclude unrecited steps. The use of the term comprising to introduce claimed structure means that the ingredients covered by these claims may involve more elements than those positively recited. *Ex parte Gottzein* et al. 168 USPQ 176 (PTO Bd. App. 1969). Comprising leaves the claim open for inclusion of unspecified ingredients even in major amounts. *Ex parte Davis* et al. 80 USPQ 448 (PTO Bd. App. 1948).

4. Applicants arguments are found persuasive because the percentages and particle size are in the specification therefore this part of rejection is withdrawn.

5. Amendments filed on 4/30/08 are new matter.

#### **Scope of Enablement Rejection**

Applicant argues that specification discloses the claimed invention. Applicants refer to example 15 according to them

Examiner has not provided any rationale, why a person of ordinary skill in the pertinent art would require undue experimentation in order to arrive at a solid mixture corresponding, for example, to the mixture illustrated in applicants' Example 15 but comprising a sulfonylurea herbicide other than metsulfuron methyl, namely by intensively mixing and grinding a mixture of

6.9 g of any otherwise known sulfonylurea herbicide

3 g of Tamol<sup>®</sup> NH

6 g of Ufoxane<sup>®</sup> 3A

15 g of Extrasil<sup>®</sup>

43.1 g of ammonium sulfate

The example 15 in the specification clearly contains metsulfuron-methyl and not any known sulfonylurea. For Applicants convenience

**Example 15**

A mixture comprising:

15      6.9 g of metsulfuron-methyl (technical grade, 99%)  
         3 g of Tamol<sup>®</sup> NH  
         6 g of Ufoxane<sup>®</sup> 3A  
         15 g of Extrasil<sup>®</sup>  
         43.1 g of ammonium sulfate

Further Applicant had cited Bedbrook et al. (US Patent 5,605,011) stating that it –

Actually the reference teaches opposite of what applicants have cited and arguing. See lines 67 to 68 in column 27 as follows:

**Transformed plants of the present invention are resistant to many of the sulfonylurea, triazolopyrimidine sulfonamide**

Continues in column 28:

## 28

and imidazolinone herbicides. These herbicides are disclosed in the following patents and published patent applications as follows:

### Sulfonylureas

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U.S. 4,127,405	U.S. 4,383,113
U.S. 4,169,719	U.S. 4,394,153
U.S. 4,190,432	U.S. 4,394,506
U.S. 4,214,890	U.S. 4,420,325
U.S. 4,225,337	U.S. 4,452,628
U.S. 4,231,784	U.S. 4,481,029
U.S. 4,257,802	U.S. 4,586,950
U.S. 4,310,346	U.S. 4,435,206
U.S. 4,544,401	U.S. 4,514,212
U.S. 4,435,206	U.S. 4,634,465
	EP-A-204,513

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### Triazolopyrimidine sulfonamides

South African Application 84/8844 (published May 14, 1985)

### Imidazolinones

U.S. Pat. No. 4,188,487

EP-A-41,623 (published Dec. 16, 1981)

The nucleic acid fragments of the present invention encode ALS which is resistant to the following sulfonylurea herbicides:

The reference does not teach that all sulfonylureas will have the same activity.

Applicant further argues about the Hirai et al which was cited by the Examiner in scope of enablement rejection lacks any reasonable basis. Examiner disagrees because it teaches the structural modification of sulfonylureas with nitrogen-containing heterocycles such as pyrrole and pyrazole rings is shown chronologically in Figure 5, which includes pyrazosulfuron-ethyl and halosulfuron-methyl. Various type of sulfonylureas with five membered heterocycles are shown in Fig. 4, such as thifensulfuron. Other sulfonylureas possessing benzyl, sulfonamido, aniline and phenoxy groups are depicted in Fig. 6. Examiner believes that this is a good reference for scope of enablement rejection.

#### **Obviousness Rejection**

Claims 10-17, 19, 20 and 22-31 rejected under 35 U.S.C. 103(a) as being unpatentable over KOCUR et al DUPONT and MALIK et al is maintained .

Applicants arguments were fully considered but are not found persuasive because DUPONT teaches that **granules of sulfonylurea including the elected species**. See Dupont on page 1:

DuPont Escort, Oust and Telar are all members of the sulfonylurea family of herbicides. They are used in industrial weed control situations, at high rates in bare ground programs and at low rates for selective weed control. All three products are formulated as dispersible granules and used at the rate of ounces or fractions of an ounce per acre. Escort (metsulfuron methyl) is used for broadleaf weed and brush control; Oust (sulfometuron methyl) is used to control both grassy and broadleaf species; and Telar (chlorsulfuron) is used primarily for broadleaf weed control. Plants absorb all three products by foliar and root uptake.

#### **Compatibility**

The three products are compatible with most noncrop chemicals. Do not mix Escort, Oust and Telar with DuPont Hyvar® X-L herbicide or other high-pH formulations. Small quantities of each product should be tested for compatibility with companion products before attempted field-scale use.

#### **Stability**

Escort, Oust and Telar dispersible granules have proven to be stable when stored in their original containers at normal temperatures. Spray preparations of Telar and Escort may degrade in acidic solutions if not used in 24 hours. Spray preparations of Oust may degrade in acidic solutions if not used in 48 hours. All three products are stable in alkaline solutions.

Escort, Oust, and Telar (all members of the sulfonylurea family of herbicides) and Escort

(Escort is metsulfuron methyl which is the elected invention) in the form of dispersible granules are stable when stored in their original containers at normal temperatures.

DUPONT teaches that sulfonylurea herbicides are very effective inhibitors of plant cell division and growth. They inhibit the activity of a key enzyme in plants (acetolactate synthase, or ALS) for plant cell growth. DUPONT also teaches that, at pH 5 and pH 9, the hydrolysis half-life is stable.

KOCUR et al was used because it teaches liquid herbicidal compositions comprising a compound of the Formula (I) and an alkyl polyglycoside and at least one surfactant. KOCUR et al teaches that the surfactants mentioned can be employed advantageously in combined formulations of I with other herbicidal active substances such as sulfonylureas like DPX-L-5300 (tribenuron), thiameturon-methyl, **metsulfuron-methyl (elected species)**, or nicosulfuron (Ishihara), where they can enhance the action of I.

**KOCUR** teaches that various materials such as insecticides, insect repellents, fungicides, bactericides, herbicides, and plant growth regulators may be formulated into various products for use on crops, for insect control, weed control and the like. Often, these products are applied as a dry powder or a granular material to the surface, which is desired to be treated. MALIK et al teaches a specific dispersing aid is often employed when the product is to be applied in a powder or dry form.

**MALIK et al specifically mentions the usefulness of alkyl polyglycosides**. MALIK et al teaches the lower Degree of Polymerization (DP), lower alkyl chain-length materials tend to be rather water insoluble and thus are excellent for incorporation in powdered or pulverulent products whereas the higher DP materials are valuable in that they have substantial emulsification capacity to function as a dispersing agent in the present invention.

It would have been obvious to one skilled in the art at the time the invention was filed to prepare a solid composition containing sulfonylurea and alkylpolyglycosides because first



DUPONT teaches solid granules of elected and exemplified sulfonylurea and teaches the advantages of being excellent herbicides and are known to be stable in solid form second, alkylpolyglycosides are known to be excellent surfactant and also can be in the solid form such as granule. Third, that since both the compounds is known to exist in solid form therefore it would have been obvious to prepare a solid composition containing sulfonylurea and alkylpolyglycoside.

One skilled in the art would have been motivated at the time of invention to prepare any solid composition of any herbicides such as sulfonylureas and alkyl polyglycosides because the prior art of MALIK et al and DUPONT teach these compositions, their uses, and their process of making. One skilled in the art would have been motivated at the time of invention to make the composition of alkylpolyglycoside and sulfonylurea herbicides as presently claimed because the KOCUR et al teaches the effective and advantageous combination of alkylglycosides and sulfonylurea herbicides and glufosinate. The instant invention is drawn to the same combination minus glufosinate,

KOCUR et al teaches that the formulation can be prepared solvent free (lines 59-64, column 1). The combined formulations containing sulfonyl ureas and polyalkylglycosides are storage-stable, undergo virtually no chemical changes, and are simple to handle. DUPONT teaches that dispersible granule is more stable.

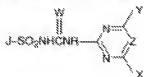
See KSR Supreme Court of United States Decision (Decided April 30, 2007, KSR INTERNATIONAL CO. v. TELEFLEX INC. et al. No. 04-1350) where it states that "However, the issue is not whether a person skilled in the art had the motivation to combine the electronic control with an adjustable pedal assembly, but whether a person skilled in the art had the motivation to attach the electronic control to the support bracket of pedal assembly". In the present case the combination of alkylpolyglycoside and sulfonylurea in solid form as claimed would have been obvious to one skilled in the art at the time the invention was made because prior art teaches the combination of both the components as cited above.

It has been decided by the court that "One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references." *In re Keller*, 642 F. 2d 413, 208 SPQ 871 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed Cir. 1986). See MPEP 2145.

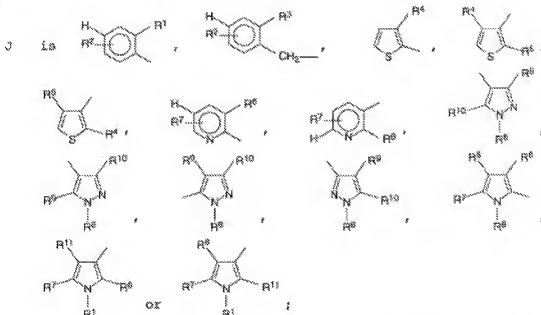
KOCUR et al teaches that the combined formulations containing sulfonyl ureas and polyalkylglycosides are storage-stable, undergo virtually no chemical changes, and are simple to handle. Since KOCCUR et al teaches a liquid composition of sulfonylurea and alkylpolyglycoside and DUPONT teaches all three products Escort, Oust and Telar are formulated in dispensable granules stable solid sulfonylurea's and MALIK et al teaches that alkylpolyglycosides excellent surfactants and can be in solid form it would have been obvious at the time the invention was filed to combine sulfonylurea herbicide and alkylpolyglycoside in solid form and to get solid mixture.

Applicants claimed invention is drawn to a combination of very large number of compounds which are different from each other. They have different chemical structure and properties. Some compounds are as follows:

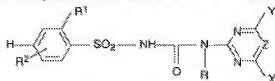
22. (previously presented) The solid mixture as claimed in claim 10, wherein the sulfonylurea herbicide has the formula



where



11. (previously presented) The solid mixture as claimed in claim 10, comprising a sulfonylurea herbicide of the formula



10. (currently amended) A solid mixture comprising

- a) a sulfonylurea herbicide, and
- b) an alkylpolyglycoside, and
- c) optionally one or more further active compounds.

with the proviso that said further active compound (c) is different from aminophosphoric acids.

The data does not commensurate with the scope of the claims.

It has been decided by the courts that “[w]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious”. KSR v. Teleflex, 127 S.Ct. 1727, 1740 (2007)(quoting Sakraida v. A.G. Pro, 425 U.S. 273, 282 (1976)). “[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious”, the relevant question is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” (Id.). Addressing the issue of obviousness, the Supreme Court noted that the analysis under 35 USC 103 “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” KSR v. Teleflex, 127 S.Ct. 1727, 1741 (2007). The Court emphasized that “[a] person of ordinary skill is... a person of ordinary creativity, not an automaton.” Id. at 1742.

Consistent with this reasoning, it would have obvious to have selected various combinations of various disclosed ingredients from within a prior art disclosure, to arrive compositions “yielding no more than one would expect from such an arrangement”.

Where a valid case of prima facie obviousness has been established, the burden shifts to applicant to demonstrate that a claimed functional property is applicable to the claim in its broad scope: In re Greenfield, 197 USPQ 227, 229 (CCPA 1978). (Holding that despite the fact that the rejection was one of obviousness and not anticipation, the burden was nevertheless on applicant to provide factual verification of the alleged functional property). Thus, even assuming *arguendo* that applicant has shown that a specific combination of the sulfonylureas and polyalkylglycosides might exhibit unexpected; this has not been shown for the broad genus currently claimed.

It is *prima facie* obvious to select a known material for incorporation into a composition, based on its recognized suitability for its intended use. See MPEP 2144.07. It is *prima facie*

obvious to combine two compositions, each of which is taught by the prior art to be useful for same purpose, in order to form a third composition to be used for the very same purpose. The idea for combining them flows logically from their having been individually taught in the prior art. See MPEP 2144.06.

The data in the specification has been considered by the Examiner. In table 3 on page 35 of the application, formulations which comprise SU- 1 or metsulfuron-methyl and either Lutensol® ON 30, Lutensol® ON 80, Armoem® 557, or Pluronic® PE 6400 suffers a loss in active ingredient in the range from 87 to 52% of the start- mg level when stored for 2 weeks at 54°C.55).

The data does not commensurate with the scope of the claims.

Rejection under 35 U.S.C. 101 is withdrawn because claims of US Patent 6,482,772 have been disclaimed.

Applicant is requested to disclose what prior art has been disclaimed in claim 1 part c).

#### ***Conclusion***

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

#### **Communication**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SABIHA QAZI whose telephone number is (571)272-0622. The examiner can normally be reached on any business day except Wednesday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fetterolf Brandon can be reached on (571) 272-2919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sabiha Qazi/

Primary Examiner, Art Unit 1628